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ABSTRACT

This field experiment investigated the effects of confronting people with different types and timings of descriptive feedback on their presentations of self. The experimental subjects were 28 male graduate students. The subjects made three-minute informal presentations on a personal topic and then received feedback on their individual performances. Feedback types and sequences were: (1) T.V. video-tape replay; (2) expert description, and then delayed T. V.; and (3) no immediate feedback (control) followed by delayed T. V. Semantic differential instruments, developed to assess the visual and vocal self, were administered before, during and one week after the experiment. The results indicate that: (1) immediate T. V. feedback had a stronger effect upon the structures of the self-percepts than did expert feedback or no feedback, but the differential effects were not always significant; (2) subjects in all three group-conditions first shifted significantly toward self-attitudes which were more favorable; (3) both types of change were greater for subjects with less speaking ability; and (4) the revised self-assessments were not altered further by any delayed T. V. feedback and were maintained over a follow-up period of one week. (Author)

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THE EFFECTS OF TELEVISION AND EXPERT FEEDBACK ON SELF-PERCEPTION*

by
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Assistant Professor of Behavioral Science
and
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Research Paper No. 31

UNIVERSITY OF CALIFORNIA, LOS ANGELES

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April, 1970

THE EFFECTS OF TELEVISION AND EXPERT FEEDBACK ON SELF-PERCEPTION

A man's view of himself is a central concept in many theories of social behavior and personality development. Cooley's early formulation (1902) of the "looking glass self" and Mead's notion (1934) of "taking the role of the generalized other" undergird the widely accepted view that the self-concept is rooted in the matrix of social interaction. Empirical research (Manis, 1955; Videbeck, 1960; Sherwood, 1965) also establishes the broad connection between the evaluative reactions of others and one's conception of himself.

The use of audio and audiovisual devices to provide impersonal feedback on one's behavior has been growing in the practice of training, education, and counseling. Such usage generates some interesting theoretical questions. Does confrontation with descriptive, non-evaluative feedback from an impersonal source affect one's self-conception? In what ways might there be perceptual changes and how permanent would they be? Will people focus on their shortcomings and discrepancies or upon their strengths? How does impersonal, descriptive feedback differ from feedback from other people? And, will these effects and differences be function of personality or ability? Ricker, et al,(1967) in their extensive literature review verified that little systematic study. has been given to these questions.

How a person behaves and performs at various times represents raw material which can be used to modify and develop his concept of self.

The process of attending to and interpreting feedback on his behavioral presentations (Goffman, 1959) plays an important role in this development. In familiar situations adults usually have preconceived ideas of their presented self. How they appear (visual) and sound (vocal) are two of these organized self-percepts. While communicating, people may or may not be aware of the self-editing and monitoring processes (Mahl, 1962; Holtzman & Rousey, 1966) which mediate between their inner thoughts and the outward behavior. These processes will make the external behavior that is objectively recorded or perceived by others different from that experienced internally by the person communicating. Feedback can serve to bridge this gap and thus become a stimulus for reorganization and shifts in the self-percept. The impact of feedback should be greater when the feedback is a vivid, extensive representation of the self-image, when the source is trusted, when the person is ego-involved in the performance, and when he has a less well-defined perception of his presented self.

In a study in which people listened to a tape recording of their voice, Holzman and Rousey (1966) found that the subjects experienced an immediate affective reaction, usually negative, upon hearing their own voices. The authors noted that the negative affective reaction faded rapidly and was followed by an acceptance of the voice.

How much more intense must be the reaction of individuals when they are confronted simultaneously with both visual and vocal feedback on themselves? Television video-tape allows for an immediate and vivid representation of a person's presentation. The judgment of an expert

or an instructor is another, more frequently used, means for providing such descriptions. One interest of this study was to compare the potency of different methods and timings of feedback in creating change in how people conceive of themselves. Because of its advantages of providing more extensive data, of coming from a machine and seeming more unbiased or "objective," and of novelty, we predicted that the feedback by television would create more change than feedback by an expert.

When people make presentations the phenomenon of stage-fright or anxiety is well known. The research of Clevinger (1959) suggests that an audience of observers or experts tends to notice less disruption in a speaker than he is aware of internally. For this reason we predicted that people receiving an accurate representation (from television or an expert) of how they appeared to others during a presentation would reassess themselves in ways which were generally more positive. For these shifts to be important phenomena they should be sustainable after such an experience and we predicted that the shifts in self-assessment would be maintained. Changes in self-perception are likely to be also a function of individual differences and we predicted that subjects with less self-esteem would be more susceptible to modification in the structure and assessment of self-perception.

Method

Subjects

The subjects were 28 male graduate business students at a large university who were enrolled together in a special program and had known each other for about one month. At the time of the study the students had just begun an introductory course in communication. Few of the subjects had had any prior experience in public speaking and only one had ever seen himself before on television.

The research was woven into the fabric of the course so as to take advantage of the realistic situation provided and to minimize any unnatural effects due to awareness of research objectives. The students were to present themselves and receive feedback in the context of an audience of relevant others.

Design and Procedure

The subjects were first randomly assigned to one of the three experimental group-conditions. The assignments were selected separately from among each of four levels of speaking ability[1], as classified on the basis of a four-category self-assessment scale given in a background questionnaire three weeks earlier. The assignment of groups to experimental conditions was random.

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[1]Originally, thirty students were enrolled in the course but two failed to appear on schedule for the research. Several requests for a change of schedule had to be honored and thus the exact conditions of stratified random assignment were not met.

In a special classroom studio fitted with a television camera and lights each person made a presentation of approximately three minutes, in the presence of other student subjects, the instructor and the television technicians. The lighting was such as to prevent the speaker from seeing the audience clearly and receiving cues as to their reactions. The subject matter of their talks was personal -- a favorite story, the person I most admire, etc.

After the subjects in each group-condition had spoken they received a particular feedback treatment and sequence, given in the studio in the presence of other group subjects. Group I subjects received immediate feedback via a video-tape replay of their presentation on a 28" closed circuit television monitor.[2] Group II subjects received feedback in the form of an animated, realistic, one-minute description of their visual and vocal characteristics by a speech expert (the instructor.)[3] Group III subjects, in order to provide a comparison base-line, received no immediate feedback after their speech. Both Groups II and III subsequently received a video-tape playback one half hour later.

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[2]The television technician systematically panned the full torso and face of the person. In this way each subject had the opportunity to observe full body, upper torso, and face in a similiar sequence and in about equal proportions of time.

[3]An example, in part: "As you began to speak you were swinging your arms like this (demonstration) suggesting some tenseness in the body. Immediately afterward you became controlled (demonstration) ... You gave the same vocal response to different meanings (demonstration ..."

In other words, the sequence was as follows: Group I subjects spoke and then viewed the T.V. replay; Group II subjects spoke, received expert feedback, later viewed the T.V. replay; Group III subjects spoke, received no feedback, later viewed the T.V. replay. All subjects completed the research instrument at several points in time -- before the session (T_1), immediately following the assigned method of initial feedback (T_2), after any subsequent T.V. feedback (T_3), and one week after after the experiment (T_4). The following figure schematically portrays this design.

Group I	T_1	Speech	T.V. Feedback	T_2	(Time Lapse)		1 week	T_4
Group II	T_1	Speech	Expert Feedback	T_2	T.V. Feedback	T_3	1 week	T_4
Group III	T_1	Speech	(No Feedback)	T_2	T.V. Feedback	T_3	1 week	T_4

Time ----------→

Instrument

Two semantic differential instruments tailored to speech situations were developed for this study. The instruments were designed to tap those specific dimensions most relevant to the presentation of self in speaking situations, particularly those applicable to visual features and vocal qualities. The scales were selected on the bases of our earlier pilot test, previous research (Smith, 1959, 1961), and texts on commu-

nication which describe manifestations of anxiety and adjustment to a speaking situation. The semantic differential has generally been shown to have the requisite sensitivity and stability for studies of attitude change (Osgood, Suci, & Tannenbaum, 1957).

The concepts and scales were as follows:

Visual Self ("I see myself as"): dynamic--static; passive--active; poised--nervous; uncontrolled--controlled; calm--excited; tense--relaxed; coordinated--awkward; indirect--direct; friendly--unfriendly; negative--positive; strong--weak; animated-lifeless.

Vocal Self ("I hear myself as"): tense--relaxed; pleasant--unpleasant; monotonous--varied; smooth--rough; garbled--distinct; strong--weak; timid--forceful; clear- unclear; agreeable--disagreeable.

Each scale contained the standard (Osgood, et al, 1957) seven intervals between the bipolar ends, with the middle (fourth) interval representing neutrality or indecision. The scales were arranged to alternate the order of the favorable ends so as to counteract response bias tendencies, and the format was identical for all subjects and administrations.

Results

Changes in self-percept may be divided into two types: change in the overall structure or constellation of the self-concept, and shifts in attitude or assessment of self on a particular dimension. This distinction led to the two kinds of measure used in the analysis--the overall distance between a subject's pattern of ratings at two different times, and the shifts of ratings on particular scales. Changes were

tested with non-parametric statistics (Siegel, 1956) whenever feasible since the group sizes were small and some distributions unlikely to be normal.

Prediction 1: Relative Strength of Feedback Methods

For this comparison a measure of the total change over time in the constellation of each subject's visual and vocal self-perception is appropriate. The "distance (D) score" is a measure of linear relation in semantic space and it takes into account patterning information as well as mean difference (Osgood & Suci, 1952). The distance is computed by summing the squared differences between each pairing of scale ratings on a concept by the subject at two different times, and taking the square root.

Table 1 presents the average D-scores between the pre-speech and

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Insert Table 1 about here

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first post-feedback state (T_1 to T_2) for the subjects in each group-condition. On both the visual and vocal concepts the constellations of self-percepts of subjects in Group I (immediate television replay) changed more than those in Group II (expert descriptions), and Group II more than those in Group III (no external feedback). The vocal self D-scores in Group I were significantly higher than those in Groups II and III (.10 and .025 respectively, Mann-Whitney U test). Group II D-scores were not significantly higher than those of Group III. In summary, the predictions of I > II > III were upheld directionally

TABLE 1

Mean Distance Between the Structure of Subjects' Self Perception by Group From Pre-Speech to Post-Feedback (T_1 to T_2)

Concept	Group-Condition			Difference Tests[a]					
				I vs. II		I vs. III		II vs. III	
	I	II	III	U	p	U	p	U	p
Visual Self	6.13	5.61	5.25	34	n.s.	40	n.s.	34	n.s.
Vocal Self	4.85	3.86	3.53	25	< .10	22	<.025	33	n.s.

[a]Mann-Whitney U test

with both the visual and vocal self, although the differences were not consistently significant. On the basis of these findings the hypothesis of greater strength of T.V. feedback compared to expert feedback or no feedback is considered tenable.

Predictions 2 and 3: Shifts in Self-Attitudes and Favorability of Assessment

The shifts in specific self-attitudes were analyzed by scale. To take into account any initial differences between the subjects on the individual scales, the tests were made on the changes between times on each scale (Wilcoxon matched-pairs signed-ranks test). Table 2 presents the means, standard deviations, and significance levels of the shifts in self-attitude from pre-speech to post-feedback (T_1 to T_2).

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Insert Table 2 about here

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It may be seen from the first column of Table 2 that the ratings of Group I experimental subjects shifted significantly after they spoke and received the immediate video-taped replay of their performance. The visual self-concept was judged as significantly ($p < .05$) more calm, direct, strong, poised and relaxed. The vocal self was perceived as significantly more relaxed, pleasant and clear. Group II subjects also shifted significantly after speaking and receiving the expert feedback. The visual self-concept was judged as stronger and the vocal self perceived as more pleasant, agreeable, forceful, and strong. These results must be interpreted, however, in light of the unpredicted shifts in the comparison subjects, Group III, who also shifted in self-attitudes after the speech. Their visual

TABLE 2

Mean and S.D. of Shifts in Visual and Vocal Self-Attitudes

After Initial Feedback (T_1 to T_2)

Visual Self				Vocal Self			
Scales	Group-condition			Scales	Group-condition		
	I	II	III		I	II	III
1. Dynamic-Static	.40 (1.2)	1.12 (2.1)	.30 (0.9)	1. Relaxed-Tense	1.80** (1.3)	.50 (1.2)	1.20* (1.3)
2. Active-Passive	-.10 (1.7)	.62 (1.9)	.30 (0.5)	2. Pleasant-Unpleasant	1.00* (1.5)	1.12* (1.1)	.40 (0.7)
3. Poised-Nervous	1.50* (1.8)	1.12 (2.4)	1.70** (1.5)	3. Varied-Monotonous	.20 (2.1)	.37 (1.1)	.80* (1.0)
4. Controlled-Uncontrolled	.90 (1.6)	.62 (1.5)	.40 (1.6)	4. Smooth-Rough	-.30 (1.3)	.62 (1.3)	.90* (1.5)
5. Calm-Excited	2.10** (1.9)	.50 (1.4)	1.20* (1.7)	5. Distinct-Garbled	.40 (1.7)	.62 (1.6)	.50 (1.3)
6. Relaxed-Tense	1.50* (1.7)	.37 (1.8)	1.90** (1.8)	6. Strong-Weak	.50 (1.6)	1.00* (1.4)	.50 (1.0)
7. Coordinated-Awkard	.40 (2.2)	.12 (1.4)	1.10 (1.9)	7. Forceful-Timid	.60 (1.2)	1.00* (1.3)	.60 (1.3)
8. Direct-Indirect	1.50** (1.3)	1.12 (1.5)	.70 (1.8)	8.Clear-Unclear	.90* (1.4)	.37 (1.2)	.60 (1.2)
9. Friendly-Unfriendly	-.10 (0.7)	.50 (0.8)	.50* (0.7)	9. Agreeable-Disagreeable	.60 (1.5)	.75* (0.9)	.30 (0.9)
10. Positive-Negative	.20 (1.5)	.62 (1.7)	.90 (1.7)				
11. Strong-Weak	1.20* (1.4)	1.25* (1.4)	.70 (1.3)	Favorability Index	5.70* (10.3)	6.37** (5.9)	5.80** (6.3)
12. Animated-Lifeless	.10 (2.3)	.50 (1.8)	.10 (1.2)				
Favorability Index	9.60* (14.6)	8.50 (13.9)	9.80* (11.3)				

*p < .05, one-tailed, Wilcoxon matched-pairs signed-ranks test

**p < .01,

self-concept was judged as significantly more relaxed, poised, calm, and friendly, while the vocal self was perceived as more relaxed, varied, and smooth. Since the no feedback subjects (III) also shifted in self-attitudes from T_1 to T_2 it is not possible to attribute the shifts solely to the experimental feedback conditions.

The favorability of the shifts was tested on changes in the summary index of favorability. The index had been constructed by summing each subject's semantic differential ratings across the scales for each concept. The summation used the direction of the scale which named the characteristic generally viewed by communications experts as more desirable, e.g. dynamic, active, etc. The results of the analyses shown in Table 2 indicate that the initial shifts in the ratings of both concepts after speaking and feedback were generally favorable. Both of the favorability indices were significantly higher in every case but one and almost all of the individual scale ratings shifted in the direction of more favorable self-assessment. An analysis of each subject's change revealed that almost 80% of the subjects shifted more favorably on both the visual and vocal self. Thus, the prediction of favorable shifts was supported, although not differentially as a result of the experimental feedback conditions.

Although the mean favorability of the shifts was comparable in all three groups, the variance of the shifts was largest in Group I. On 12 of the 19 completely independent scales Groups I and II were each larger in variance than Group III. The probability of these joint occurences is less than .02, two tailed. The differences in group variance indicate that subjects in the two experimental groups were more variably affected

by the feedback than subjects in the comparison group.

In order to examine further the general phenomenon of the subjects' shifts in self-attitude after the presentations and initial feedback, several post-hoc analyses were made. A factor analysis of all raw scores was performed to provide a more reliable condensation of the 21 original scales. Four factors were extracted with eigenvalues greater than 1, accounting for 63% of the variance. The rotated solution yielded well-defined orthogonal factors labelled: (A) Tension-Anxiety (with loadings > .60 by scales 5, 6, 3, 13, and 2), (B) Activity (scales 2, 12, 10, and 1), (C) Potency (>.50 by scales 19, 18, 11, and 8), and (D) Clarity (scales 20, 17, 14, and 16). Weighted factor scores were then computed for each subject using the high loading scales on each factor. Analyses of variance on each of the four sets of factor scores showed that groups were not significantly different on any of the factors at T_1, before the experiment (all F's 1.10, df = 2). Analyses of variance were then carried out on the changes in factor scores from T_1 to T_2 and are reported in Table 3. The differences among the three groups were not signi-

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Insert Table 3 about here

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ficant on Tension, Activity, or Clarity but were significant on the changes in Potency factor scores ($F = 4.51$, $df = 2$, $p < .05$). The shifts in Groups I and II on Potency were significantly larger than those in Group III. The results of this analysis indicate that the two experimental groups shifted positively on the Potency scales after the initial

TABLE 3

Mean Shifts in Factor Scores From Pre-Speech to Post-Feedback (T_1 to T_2)

Factor	Group-condition			Analysis of Variance	Difference Tests[a]					
					I vs. II		I vs. III		II vs. III	
	I	II	III		U	p	U	p	U	p
A-Tension	-1.12	-0.52	-1.04	n.s.						
B-Activity	-0.51	0.28	0.24	n.s.						
C-Potency	0.91	1.09	0.24	<.05	41	n.s.	32	<.15	16	<.04
D-Clarity	0.15	0.24	0.54	n.s.						

[a] Mann-Whitney U test, two-tailed probability

feedback while the no-feedback comparison group was not affected.

Delayed T.V. Feedback

No hypotheses had been developed concerning the effects of delayed T.V. feedback. Since Group II and III subjects subsequently received this feedback an analysis of its effects was undertaken. The results indicated a pattern of slight, non-significant shifts from T_2 to T_3 toward more favorable scores in Group III and slight, non-significant shifts in both directions in Group II. Only one of the twenty-one scales in one of the groups showed a significant (.05) increase and neither of the favorability indices changed significantly in either group. When subjects in both groups were pooled, none of the scale shifts were significant. None of the changes in factor scores were significant for either group or the combined groups. These results are in contrast to the pronounced, significant shifts observed in all groups from T_1 to T_2.

Prediction 4: Stability of the Shifts in Self-Attitudes

This prediction concerned the retention of shifts in self-attitudes in all groups after the experiment. It may be seen from Table 4 that the increases from pre-speech to follow-up (T_1 to T_4) in the visual and

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vocal favorability indices were significant at the .01 level for Groups II and III. The increases in the Group I indices, originally more variably affected, did not quite retain significance. When subjects in all

TABLE 4

Means of Shifts in Visual and Vocal Self-Attitudes

From Pre-Speech to Follow-up (T_1 to T_4)

Visual Self					Vocal Self				
Scale #	Group				Scale #	Group			
	I	II	III	Combined		I	II	III	Combined
1.	.40	1.25**	.10	.55*	1.	1.40*	1.00*	1.30**	1.26***
2.	.70	1.00*	.30	.64*	2.	.50	.87*	.50*	.62**
3.	1.50*	1.37**	1.80**	1.54***	3.	-.30	.87*	.30	.25
4.	.90	.12	.40	.50	4.	-.10	.75	.80*	.47*
5.	1.40*	.75*	1.10*	1.10***	5.	.00	.62	1.00**	.55*
6.	.90	.87*	1.40*	1.06***	6.	1.10*	.87*	.80*	.93***
7.	.90	.12	.90*	.68*	7.	.40	1.00*	.70*	.68**
8.	1.00*	.62	1.00*	.89***	8.	.40	-.12	.80**	.39*
9.	.10	.37	.30	.25	9.	.70	.87*	.40	.64**
10.	-.10	.50	.30	.22	Favor-ability Index	4.10	6.75**	6.80**	5.83***
11.	.80*	.62	.50	.64**					
12.	.20	.75	.10	.32					
Favor ability Index	8.70	8.37**	8.20**	8.36***					

*p < .05, one-tailed, Wilcoxon matched-pairs signed-ranks test

**p < .01

***p < .001

three groups were pooled, the increases in both favorability indices were significant at the .001 level. For the combined population, the visual self was perceived as more poised, direct, relaxed, calm, strong, dynamic, coordinated, and active; the vocal self was more relaxed, strong, pleasant, forceful, agreeable, distinct, smooth, and clear.

The stability of shifts was also examined in two other ways. First, an analysis was made of shifts from the end of all feedback (T_3 or T_2) to the follow-up (T_4). These data indicated a pattern of very slight attenuation of effects. Neither of the favorability indices decreased significantly in any of the three groups. Only one of the scales in one of the groups reflected a significant decrease. When all subjects were pooled, only two of the scales showed significant (.05) decreases. The second approach was to examine all the scales on which subjects showed significant increases during the various feedback treatments (T_1 through T_3, all subjects pooled) and compare them with those retaining significant changes at the follow-up (T_1 to T_4). Overall, of the 15 initially significant shifts on visual and vocal scales which were non-overlapping, 14 of the shifts were still significant at the end of a week and at almost the same level of significance. The results of these analyses, then, indicate that the initial shifts in visual and vocal self-attitudes were retained over the follow-up period of one week and did not return to the pre-speech state.

Prediction 5: Individual Differences

The analyses of data by group means and differences reported thus far tend to obscure the individual differences among subjects. In order

to understand the change effects more fully, an analysis of the data was undertaken by subjects. The subjects were pooled across group-conditions and then the changes in self-percept structure and self-assessment were cross-classified by speaking ability (as rated by subjects three weeks earlier). The results presented in Table 5 show that subjects with less self-esteem in their speaking ability initially reflected

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Insert Table 5 about here

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more total change in the structure of their self-percepts ($p < .02$ and $< .10$) and their shifts in self-assessment tended to be larger and more positive ($p < .06$ and $< .20$, n.s.). The differential effects by speaking ability were not maintained clearly one week after the experiment (T_4).

Discussion

To summarize, it was found that: (a) immediate T.V. feedback had a greater impact upon the structural organization of the self-percept than did expert feedback or no feedback; (b) the direction of the initial shifts in specific self-attitudes after the speech was favorable for a majority of the subjects on almost all of the scales; (c) the favorability of the shifts was not related to the experimental feedback conditions, although the variability of shifts was larger in the experimental groups; (d) both the changes in self-percept organization and the shifts in visual self-assessment were more pronounced among the subjects with less speaking ability; (e) delayed T.V. feedback had no perceptible effects; and (f) any post-speech revisions in self-assessment were main-

TABLE 5

Crossbreak of Mean Self-Percept Changes and Shifts in Self-Assessment by Subjects' Speaking Ability

Speaking Ability	D-Scores				Self-Assessment Shifts			
	T_1 to T_2		T_1 to T_4		T_1 to T_2		T_1 to T_4	
	Visual	Vocal	Visual	Vocal	Visual	Vocal	Visual	Vocal
Poor, Fair n = 11	7.1	4.7	5.6	4.1	+14.0	+7.5	+7.8	+5.3
Average n = 17	4.7	3.7	4.7	3.7	+ 6.3	+4.9	+8.8	+6.1
Difference Test[a]	< .02	< .10	n.s. (< .15)	n.s.	< .06	n.s. (< .20)	n.s.	n.s.

[a]Mann-Whitney U Test

tained with little attenuation over the following week.

The results concerning the shifts in self-assessment require further discussion. Initially, subjects in all three group-conditions shifted in ways which were generally more favorable. Subjects seemed to be saying, in effect, "what a relief that it is over, and it seems like I come across much better than I thought!" Since the no feedback condition (III) subjects also shifted, one cannot attribute the favorable shifts to the experimental feedback conditions. Rather, it appears that factors connected with the shared experience of making a presentation and seeing others do so led to the favorability of the shifts.

Additional understanding of the initial shifts phenomenon may be gained by examining their content and the results of the factor analysis. The scales showing the largest initial shifts ($p < .01$) in the pooled population were inspected. There were marked decreases in subjects' excitement, tenseness (visual and vocal), nervousness, and marked increases in strength (visual), directness, pleasantness, and forcefulness. The former group of scales may be interpreted as indications of a state of excitement or of anxiety in the subjects, while those in the latter cluster suggest more stable attributes concerning one's "potency" or self-confidence. The factor analysis confirmed this distinction by yielding a Tension-Anxiety factor and a Potency factor. There were similiar reductions in tension in all three groups after the speech and initial feedback condition. Although simply making a presentation may have led to a reduction of tension, it is not convincing to also attribute the increases in strength, directness, etc. to this explanation. On every one

of the four scales in this second cluster the subjects receiving either television or expert feedback (Groups I and II) increased slightly more than the no feedback, comparison group (III) subjects (Table 2). The analysis of changes in Potency factor scores (Table 3) confirmed this difference. Thus, these "potency" attributes of the self were more affected by the experimental descriptive feedback than the tension or anxiety variables.

Although subjects in all group-conditions experienced generally favorable initial shifts, it should be recalled here that the variability of shifts and total change in the overall patterning of self-perception were highest in Group I and second highest in Group II. Thus, subjects receiving the immediate T.V. replay reflected more overall change in the constellation of self-perception, although more variable and less consistently favorable shifts in self-assessment. The absolute values of the shifts in self-assessment were largest in Group I. In other words, immediate T.V. feedback (and expert feedback, to a lesser extent) affected subjects more strongly and in both positive and negative directions.

Overall, the data in this study suggest a reformulation of the theory; confronting a person with immediate external descriptive feedback on his presentation will have an effect upon the organization of self-perception, particularly in the area of the more stable attributes and especially so for less competent speakers. In the absence of immediate external feedback the self-percept is affected less strongly overall but tends to drift toward more favorability.

Perhaps the absence of external feedback may allow for relief and reduction of anxiety while not affecting the more stable attributes or the general structural organization of self-perception.

Two factors explaining the general favorability of the initial shifts may be suggested. Although subjects were exposed to external feedback (or precluded from it) based on experimental manipulations, that is not to say that the subjects were unaware of any internal feedback. People may attend to kinesthic and proprioceptive cues, may imagine how they appear and sound to others, and judge these with internal standards regarding their performance. It is possible that some portion of the favorable shifts by subjects may have been triggered by feedback generated by their own internal monitoring process, almost as if they had imaginary television screens to view their performance. A second factor may have been a preliminary diminishing of self-assessment by the subjects before the presentation, so as to provide a "cushion" for possible "failure" or a level of aspiration for which to aim in anticipation of performance and feedback.

Generally, the effects of the passage of time after presentation were observable in the data in the study. The mobilization and concentration of energy involved in making a presentation and the subsequent relief carry with them their own pattern of intrapsychic dynamics. These dynamics tended to dampen the effects of different types of external feedback as experimentally manipulated in this study.

One of the unexplained questions is why delayed television feedback (T_2 and T_3) had such few consistent effects upon self-perception. Perhaps the maximal effect of giving descriptive feedback by this medium is achieved when the feedback immediately follows a presentation, before any processes of self-assessment and/or rationalization can have much time to operate. The timing of feedback for optimal effect is a subject that deserves further study.

The extrapolation of these findings to other populations should take note of the fact that the subjects were young, normal males with above average intelligence, and they were motivated for improvement but had little experience in formal communication. Since T.V. and expert feedback are broad categories, there would be many possible variations of technique, timing, and repetition which would be useful to investigate. Other questions presently under investigation include the effect of the social setting upon the feedback process, particularly the presence of other students making similar presentations and the effects of presenting oneself to an audience of relevant others. Extension of this study in other populations and settings would add to our knowledge and to the theory of self-confrontation and the effects of feedback on how people conceive of themselves.

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